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Neo-colonial credit: FinTech platforms in Africa

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ABSTRACT
This paper makes a three-fold contribution to social science research into FinTech in Africa. First, we build on existing research into mobile payments to show how FinTech providers offer unsecured short-term credit products via mobile wallets. Second, we stress how the expansion of Africa's FinTech economy is constituted through the distinctive platformization processes of platform capitalism. Third, we develop current work that highlights how the growth of FinTech in Africa rests on historically specific and geographically uneven conditions of racialized marginalization rooted in colonial legacies, and argue that FinTech is renewing and recasting colonial relations in the present. We show how FinTech platforms are assembled through neo-colonial corporate telecommunication, digital and data infrastructures that enrol differentiated populations previously excluded from formal financial relations under colonial regimes. Platforms are also revealed to extol a version of the modernizing and civilizing mission of the enlightened empowerment of individuals whilst simultaneously extracting rents through racialized expropriations. Illustration is provided throughout by in-depth case analysis of JUMO, a Cape Town-based FinTech firm that currently operates across six African countries.

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Introduction

Typically accessed by users through mobile telecommunications and smartphone applications linked to cloud computing, 'FinTech' is the digital sector of retail money and finance. Globally, FinTech features a diverse array of variegated monetary and financial ecologies, including mobile payments and transfers, online-only banking ('neo-banking'), insurance ('InsurTech'), investment, and lending to differentiated user groups. To date, social science research into FinTech in Africa has highlighted how mobile payments and transfers (including remittances) have been at the forefront of rapid expansion. Following the installation of mobile telecommunication networks across the continent from the early 2000s, informal monetary practices around airtime emerged and formal mobile money transfer and payment services subsequently gained traction (Maurer 2012). Expansion built on the initial success of M-Pesa, launched in 2007 by Vodafone's Kenyan subsidiary, Safaricom, after a pilot phase partnership with the United Kingdom's Department for International Development (Mbiti and Weill 2011, Natile 2020). Indeed, social science research also highlights how the post-M-Pesa growth of money mobile in Africa – incorporating over 100 million active users (approximately 1 in 10 adults) by 2017 – catalyzed a change in global development agendas

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(Mader 2016, Gabor and Brooks 2017, Bernards 2019a, Lai and Samers 2020). Prioritizing self-help and entrepreneurship at the so-called 'bottom of the pyramid' (BoP) (Prahalad 2006), global development programmes now stress the FinTech sector's capacity to contribute to longer-standing objectives to advance 'financial inclusion' and 'bank the unbanked' (e.g. Realini and Metha 2015, World Bank 2017, World Bank and International Monetary Fund 2018). Earlier emphasis in global development agendas on 'poverty finance' (Rankin 2013) provided by the microfinance sector in support of entrepreneurship has partially given way to the promotion of 'poverty payment' by the FinTech sector – that is, 'the process of providing services that allow people, businesses and governments to clear, settle and process the movement of funds' (Maurer 2015, p.128). While 'financial inclusion' remains an ambiguous objective in global development programmes open to somewhat different policy interpretations by national elites in Africa (Dafe 2020), it has been reframed to a certain extent by the distinctive rise of FinTech on the continent.

In this paper, we attempt a three-fold contribution to social science research into FinTech in Africa. First, building on existing research into mobile payments, we want to show how FinTech providers increasingly also offer unsecured short-term credit products via mobile wallets. While the capacity of mobile payments to advance the global development agenda is celebrated in some quarters (Nguena 2019, Cotterill 2021), social scientists typically stress how the FinTech sector engages with 'poverty' as 'a new frontier for profit-making and accumulation' (Gabor and Brooks 2017, p. 424). Profit margins on payments in Africa are among the highest in the world, at approximately two percent of the transaction value (Chironga *et al.* 2017). Moreover, transaction data from mobile payments is crucial to this 'new frontier' and 'incorporating the poor into global strategies of capital accumulation through digital footprints' (Gabor and Brooks 2017, p. 424; Westermeier 2020). We explore these processes as Fintech economies increasingly move beyond poverty payment and into what might be termed *poverty credit*, initially in East Africa and more recently in the West of the continent (Oppong and Mattern 2020). While the rise of FinTech in Africa prompted a change of emphasis in global development agendas from microfinance to poverty payment, poverty credit is fast emerging as the latest form of poverty finance. Our focus is on the formal credit–debt relations created by a host of FinTech businesses – most notably, the telecommunications corporations that pioneered mobile payments – as unsecured short-term credit products accessed via mobile wallets (see also Chironga *et al.* 2017, Ndung'u 2018, Donovan and Park 2019, Guermond 2019, Langevin 2019, Donovan 2020). To this end, we will develop a case study of JUMO (JUMO World Ltd), a Cape Town-based FinTech firm, founded in 2015. JUMO provides an 'exploratory' firm-level case study of poverty credit in Africa which we generate through qualitative textual and visual analysis of assembled materials from the company's website, promotional activities and employee presentations at FinTech industry conferences, and specialist media coverage of the firm (Streb 2010). Through partnerships with telecommunications companies and banks, JUMO currently makes possible unsecured credit products across six African states. By 2021, JUMO had helped make financial products available to 18 million users, and to the disbursement of over $3.5 billion worth of credit via 120 million individual loans, up from $2.5 billion in 2020 and $1 billion in 2019.[1]

Second, rather than connect our analysis with wider processes of marketization, financialization and datafication under global capitalism, we want to stress how the expansion of Africa's FinTech economy is constituted through the distinctive platformization processes of platform capitalism. Social scientists tend to situate the growth of FinTech in Africa in the context of the movements and processes of global capitalism – especially, the making of formal market relations (Bernards 2019b, Guermond 2020a), the extension and intensification of financial logics (Mader 2018, Frimpong Boamah and Murshid 2019, Guermond 2020b), and, the rise of data-based and data-driven economies (Maurer 2015, Aitken 2017, Gabor and Brooks 2017, Langevin 2019). We broadly agree that FinTech economies promulgate datafication as they further financialization, particularly when FinTech is mobilized in state-building projects to render populations legible for taxation and securitization interventions (Mann 2017, Jain and Gabor 2020). Our approach, however, argues that

FinTech in Africa is fostered primarily through political-economic processes of platformization and platform capitalism (Langley and Leyshon 2021). Throughout the FinTech sector globally, extensive organizational and commercial experimentations are underway with 'the platform' as a socio-technical assemblage and performative business model of capitalist intermediary enterprise. Operated by start-ups, early-career firms, BigTech corporations, incumbent banks and telecommunications companies, FinTech platforms are highly capitalized by venture capitalists, private equity and other forms of investment. The core rationale for FinTech platforms is the reintermediation of monetary and financial relations. In Africa, which is home to roughly three-quarters of the estimated 1.7 billion 'unbanked' people across the globe (World Bank 2017), reintermediation involves recruiting differentiated users into 'at-a-distance' and 'at scale' formal and platformed monetary and financial relations for the first time, thereby displacing and transforming existing informal relations (O'Dwyer 2015, Rodima-Taylor and Grimes 2019).

Third, and finally, we want to develop current work that highlights how the growth of FinTech in Africa rests on historically specific and geographically uneven conditions of racialized marginalization rooted in colonial legacies (Guermond and Samba Sylla 2018, Bernards 2019a, 2021, Natile 2020), and argue FinTech is renewing and recasting colonial relations in the present. Our approach in this paper will thereby stress how the platform political of economy of FinTech intersects with the power relations of contemporary neo-colonialism on the African continent. Through this approach, we want to expose dynamics of FinTech expansion in Africa that could be overlooked by a narrower analytical emphasis on the consequences of colonial history alone, or, indeed, by an analytical over-emphasis on the undoubted continuities of colonialism, imperialism and racial capitalism in the present.

With particular reference to JUMO and the configuration of poverty credit across the continent, the two main sections that follow will each foreground a particular set of intersections through which the operations of FinTech platforms renew and recast colonial relations in Africa. In Section 2, we invoke the notion of 'neo-colonialism' to underscore the persistence of the economic and corporate power relations of colonialism (Nkrumah 1965, Spivak and Young 1991, Langan 2018), and connect it with accounts of novel platform power on the continent as 'digital colonialism' (Kwet 2019, Gravett 2020) and 'data colonialism' (Thatcher, O'Sullivan and Mahmoudi 2016, Couldry and Mejias 2019a, 2019b). Enrolling differentiated user populations previously unconnected and excluded from formal financial relations under colonial regimes, FinTech platforms will be shown to be assembled through the telecommunication, digital and data infrastructures of the distinctive networked mode of contemporary corporate neo-colonialism. Section 3 takes insights from literatures that identify a constitutive relationship between modernity and coloniality in global development agendas (Ferguson 2002, Mignolo 2007, 2011), and which place colonial and racialized expropriation at the heart of contemporary capitalist finance (Baucom 2005, Bhagat and Roderick 2020, Chakravartty and Ferreira da Silva 2013, Kish and Le Roy 2015, Torkelson 2021). FinTech platforms such as JUMO will be shown to extol a version of the modernizing and civilizing mission of the enlightened empowerment of individuals (what we term 'platformed modernization') whilst, at the same time, extracting rents from black African populations (what we term 'platformed and racialized expropriation'). Section 4 concludes the paper.

Networked neo-colonialism and FinTech platforms

Colonialism is a set of power relations between colonizers and colonized (Fanon 2008). Its significance to global development is typically concealed by the myths of European modernity and capitalism (Mignolo 2007, 2011; Bhambra 2021). From the sixteenth century onwards, Europeans violently seized and settled the land of the native populations they enslaved, oppressed and put to work. Although sovereign naval and military power was crucial to this plundering, also key were the seventeenth-century chartered trade monopolies that became the giant corporations of the eighteenth- and nineteenth centuries (Banaji 2020). The notion of 'neo-colonialism' foregrounds how the economic and corporate dynamics of colonialism continue today, as extractive power relations of expropriation, dependency and underdevelopment persist despite the dismantling of colonial political administrations from mid-twentieth century (Nkrumah 1965, Leys 1975, Spivak and Young 1991, Langan 2018).

Original articulations of neo-colonialism, such as that offered by Kwame Nkrumah (1965), explicitly identify the significance of the 'financial power' of banks and investor institutions to the persistence of extractive economic relations. As Bernards (2021) argues in reference to Ghana and West Africa, for example, the power of foreign-owned banks established under colonial political administrations continues at present. Indeed, banks located in urban and coastal areas primarily continue to finance the large firms and foreign corporations that dominate commodity production for export, 'with credit filtering through multiple formal and informal intermediaries before reaching small producers' (p. 96). While banking and financial power is certainly an important continuity of colonial relations, it is not currently producing a uniform process of financialization across the African continent because it takes a diverse range of forms and features both '"traditional" ways of using finance to extract profits' and 'novel financial instruments' (Kvangraven *et al.* 2021, p. 119). The novel form of financial power and intermediation at work in the uneven expansion of FinTech platforms in Africa is somewhat different, then, not least because it rests on the prevailing networked and infrastructural mode of corporate neo-colonialism.

Critical accounts of global digital economic relations monopolized by BigTech corporations are beginning to highlight their neo-colonial character. Echoing an earlier wave of literature in cultural studies that teased out the contours of an 'electronic empire' of pervasive informational technologies and invasive mass media communications, these accounts point to the corporate operations of 'a mode of empire that is not strictly territorial but networked' (Raley 2004, p. 123). Kwet (2019), for example, argues that US BigTech platform corporations are presently instituting networked relations of 'digital colonialism' across Africa. Today's leading digital economy platforms do not enlist their own militaries in the conquest of land, raw materials and people, but 'a new form of corporate colonization is taking place' (p. 6). To understand how these networked neo-colonial relations are constituted, Kwet draws parallels with historical colonial infrastructural and technological developments. Like the arrangements of formal banking discussed above, colonial railway and shipping architectures were engineered to serve the interests of firms and merchants, largely excluding local inhabitants. Contemporary software, hardware and networked connections, meanwhile, are similarly designed by major platform corporations 'to ensure their own dominance over critical functions', and to allow them 'to accumulate profits from revenues derived from rent (in the form of intellectual property or access to infrastructure) and surveillance (in the form of Big Data)' (p. 8). Focusing on the digital infrastructure projects of China's Belt and Road Initiative (BRI) in Africa, Gravett (2020) documents the imposition of networks of 'digital neo-colonialism', highlighting that they are not the preserve of Western corporations. Similarly, Couldry and Mejias (2019a, 2019b), identify the corporate and networked mode of what they call 'data colonialism' which involves 'not one pole of colonial power ("the West"), but at least two: the United States and China' (2019a, p. 337, see also Thatcher *et al.* 2016).

Globally, the 'tech stacks' of FinTech platforms are reliant on the 'platform ecosystem' (Bratton 2016, van Dijck *et al.* 2019, Caliskan, 2021); that is, the digital networked infrastructures owned and controlled by US and Chinese BigTech corporations (Langley and Leyshon, 2021). In the African context, moreover, socio-technical FinTech platform assembly and reintermediation combines architectures of digital and data colonialism with corporate mobile telecommunication infrastructures. To date, the FinTech sector in Africa is largely accessed by users via 'feature phones' that operate via mobile telecoms networks with voice and SMS capabilities, not the internet enabled smartphones which have become ubiquitous in the global North. FinTech 'platform intermediaries' in Africa thus also tend to be neo-colonial telecommunications 'monoliths' (O'Dwyer 2019). This contrasts with US, European and Asian contexts, where FinTech platforms are typically: start-up enterprises; initiatives by incumbent banks that build on the platform ecosystem, or; lines of business for BigTech platforms themselves. In Africa, the FinTech sector provides an opportunity for corporations such as Vodacom, MTN, Airtel and Orange to create platforms that build on their 'enclosure' of telecommunications (O'Dwyer 2015), and enhance their capacity to extract rents which are both 'direct' (i.e. fees, charges) and 'indirect' (i.e. derived from the capture and analysis of user-generated data).

As the leading exponents of FinTech in Africa who offer mobile payments and, increasingly, unsecured short-term credit and other financial services, telecommunications companies tend to work in partnership with other institutions, most notably commercial banks and start-up firms. Partnerships are typically led by telcos but can also be led by banks (e.g. Equitel, a partnership between Equity Bank and Airtel in Kenya) and occasionally by start-ups (e.g. Paga in Nigeria). Successful platform reintermediation in FinTech rests on monopolizing new formal economic structures in retail money and finance, and these pressures are manifest in variegated consolidation processes, some of which are partnership-based (Langley and Leyshon 2021). Incumbent banks in Africa tend not to create their own platforms or apps but work in partnership with telco corporations and their networked infrastructures to grow the unsecured short-term credit business beyond traditional, wealthy and middle-class customer bases in the main urban centres. Meanwhile, several African cities – such as Nairobi, Lagos and Cape Town, for example – have emerged as centres for FinTech start-ups. As KPMG (2016) note in their report on FinTech in Nigeria, many start-ups in Lagos are business-to-business (B2B) firms that are 'redesigning the financial services processes with their high-end technological expertise', acting as 'enablers of change' in partnership with telco and/or banking incumbents.

Based in Cape Town, JUMO is one such B2B FinTech start-up, founded in 2015. It presently has over 300 employees, approximately two-thirds of whom are specialists in software engineering and data science.[2] JUMO does not itself provide credit, saving or insurance products – the firm is neither a neo-bank, nor a non-bank lender and financial services company. Rather, JUMO's business model is an example of a so-called 'aggregator platform'. Sometimes also termed 'Platform as a Service (PaaS)', aggregator platforms are a particular kind of multi-sided digital economy market-maker that stands between the 'sellers' and 'buyers' of products. JUMO, in short, works with telco and banking partners that wish to sell financial services, typically credit products. Other B2B FinTech firms with similar business models to JUMO include Cignifi, First Access, InVenture, and Zest Finance (Realini and Mehta 2015, Aitken 2017).

JUMO currently enables credit products to be offered across six African states (Côte d'Ivoire, Ghana, Kenya, Tanzania, Uganda, Zambia). This is revealing of the kinds of uneven geographies that mark FinTech expansion more broadly, as all six locations are amongst the 20 largest and most wealthy economies in Africa, measured in terms of nominal GDP and GDP per capita. They are also all included amongst the most 'mature' or 'maturing' markets for mobile financial services, according to categorizations developed by McKinsey (Chironga *et al.* 2017). JUMO also operates in Pakistan and, by 2021, was establishing operations in Nigeria, Cameroon, and Benin. How precisely JUMO's aggregator platform model works varies across partnerships and jurisdictions. In Zambia, for example, JUMO partners with Airtel to provide loan products called 'Na Sova'. JUMO's telecoms partners also include Telenor (the parent company of Pakistan's Telenor Microfinance Bank), and MTN Group, a Johannesburg-based multinational with telecommunications networks across 20 African states. MTN is also the second largest mobile money provider in Africa, after Kenya's M-PESA (Chironga *et al.* 2017). Some of JUMO's partnerships have proved to be relatively long-standing and on-going (e.g. with MTN), whilst others are more fleeting. For example, in 2019, JUMO was briefly involved in a pilot partnership with Uber in Kenya.[3] JUMO created credit scores for Uber drivers to access car loans, with scoring based on the driver's earnings, tips and behaviour patterns. The partnership and a plan to extend it to Uber drivers across Sub-Saharan Africa was scrapped, however, and for reasons that have not been made public by either JUMO or Uber.

Despite being located in Cape Town, JUMO is not part of the retail financial economy in South Africa. This is because, relative to other states on the continent, formal retail finance in South Africa is reasonably well established. In the wake of decades of exclusion and in the context of growing economic inequalities and mass unemployment (Ashman *et al.* 2011), credit became relatively widely available in post-Apartheid South Africa and fueled indebtedness amongst the new black urban middle class and migrants working in low-wage mineral extraction in particular (James 2014, James and Rajak 2014). At the same time, an extensive FinTech economy of short-term credit provision has grown up around the income streams of digital welfare and transfer payments by the South African state (Torkelson 2021). Nonetheless, its South African base is significant to JUMO's reach across the continent. On the one hand, this reflects the long-standing position of the country as the banking centre of the British Empire in Africa. Today, the majority of Africa's largest banks continue to be based in South Africa. On the other hand, JUMO's headquarters are in Cape Town, not South Africa's traditional financial hub, Johannesburg. The company is located a stone's throw away from Amazon Web Services at Wembley Square, in the east-side of Cape Town, and is thus part of a tech centre and FinTech hub that is presently challenging traditional dominance of Johannesburg as a location for financial services companies (CCAF 2018).

From its Cape Town base, JUMO provides its partners with a 'platform' that has 'two distinct capabilities which work together to provide a full digital banking service'. These capabilities are named 'Core' – the socio-technical arrangement that provides for 'end-to-end, next generation banking infrastructure' – and 'Unify' – 'the learning machine which analyses data to reduce the cost and risk of lending'.[4] Within Unify, JUMO deploys Apache Spark – an open-source analytics engine for large-scale data processing – on cloud computing provided by its near neighbour, AWS. To be clear, however, the credit and financial services products platformed through JUMO are only made available as a consequence of mobile telecommunications partnerships, protocols and payment wallets. Products are typically offered to feature phone users through unstructured supplementary service data (USSD) protocols, such that the user interface is similar to that of SMS messaging and up to 182 alphanumeric characters long.[5] Unlike SMS, however, USSD protocols provide for a real-time and two-way connection that makes possible the exchange of a sequence of data. This is critical for responses generated through platforms that offer users tailored credit products that include, for example, a specified amount and repayment terms. Borrowers and other users are unlikely to be aware of the workings JUMO in configuring these platforms.

Fintech platforms and neo-colonial credit

As the above analysis makes clear, the business model and socio-technical configuration of JUMO as a FinTech platform provider rests on the neo-colonial corporate mode of infrastructural and networked power relations. Working with its banking partners, JUMO's platforms combine neo-colonial telecommunications, digital and data infrastructures developed in the face of a colonial legacy of unconnected and excluded African populations. In this section of the paper, moreover, we want to explore how the platformization of differentiated user populations in formalized financial relations by JUMO also serves to renew colonialism.

Platformed modernization

The opening lines of a video posted on the company's YouTube channel in December 2018 describe JUMO as 'a platform that creates access to really good choices for customers to save and to borrow', enabling them 'to use money tools to improve their life'.[6] The video is, in part at least, a recruitment message for potential staff, and JUMO's employees (termed 'JUMOnauts') are said to be 'on a mission' to address financial exclusion through technological innovations. JUMO's FinTech business model, then, broadly aligns with the financial inclusion tropes of contemporary global development agendas, and this message repeats on multiple occasions on the firm's webpages and throughout its promotional materials. Indeed, because of its current operations across Africa, JUMO claims 150 million people are 'connected to financial choices' that wouldn't have previously been accessible to them.[7] There are strong colonial paternalist undertones in this representation of JUMO's relationships with user populations across Africa. Indeed, JUMO was initially founded in London's financial district before becoming headquartered in Cape Town, and JUMO's founder, CEO and leading crusader, Andrew Watkins-Ball, is a white man born in the UK. Watkins-Ball attended Bishops, an English-language independent boarding school for boys in Cape Town that dates back to 1849, before embarking on a career in global banking prior to founding JUMO.

Seeking to advance formal financial relations, JUMO is clearly not the only FinTech firm in Africa that, in effect, extols a modernizing and civilizing mission of the enlightened empowerment of individual users. Rejecting 'a politics of redistribution attentive to colonial history' (Natile 2020, p. 10), FinTech platforms typically seek to enable a developmental logic of opportunity that rests, more broadly, on technologically-enabled inclusion within existing formal economic structures and relations (see Elyachar 2012, Mann 2017). For us, these developmental promises of inclusion and opportunity are the contemporary expression of 'the celebratory rhetoric of modernity; that is, the rhetoric of salvation and newness, based on European achievements during the Renaissance' (Mignolo 2007, p. 41). As Mignolo (2007, p. 39) argues, modernity is locked into a constitutive relationship with 'coloniality': 'there is no modernity without coloniality'. Indeed, although 'modernity' has morphed into 'development', this constitutive relationship continues today: 'the rhetoric of modernity' and 'the logic of coloniality' are 'two sides' of the same global order, 'one constantly named and celebrated (progress, development, growth)', and one 'silenced or named as problems to be solved by the former (poverty, misery, inequalities, injustices, corruption …)' (Mignolo 2011, p. xviii). It would therefore seem that Africans can only achieve enlightenment, freedom and membership of global society if they become developed and modernized in line with European and white historical experience (Ferguson 2002).

The constitutive relations between coloniality and modernity provide the key coordinates through which JUMO positions itself as a new kind of missionary. JUMO's platforms integrate the business of banking into neo-colonial data, digital and telecommunication infrastructures. In the parlance of global development agendas, these platformed infrastructures are enabling so-called 'leapfrogging'; that is, network technologies seemingly make it possible for African societies to develop without the necessity of moving through all of the purported stages of modernization experienced in Europe and the global North. As JUMO's Africa Region and Pakistan CEO, Buhle Miranda Goslar, explains, the rapid up-take of mobile telecommunications technology and mobile money across Africa has created 'a new launchpad for the digital economy in emerging markets', but there remains a 'credit gap' for users.[8] For Goslar, it follows that 'economic inclusion and development' – defined as 'more resilient households, job creation and thriving micro and small businesses' – are possible 'when we get digital credit right'. To get digital credit 'right', JUMO's own solution is a 'cloud and AI-powered technology stack' that provides a platform which 'connects banks with traditionally inaccessible customers in cost-effective, low-risk and responsible ways'. If the attention of global development consultants (e.g. Deloitte, 2017) and the host of industry awards received by JUMO are anything to go by, then the firm is currently 'getting it right' and delivering on the mission of platformed modernization.

The firm's contribution to platformed modernization in Africa also figures strongly in the various rounds of investment that have capitalized JUMO to date. According to Crunchbase, by April 2020, JUMO had raised US$146.7 million of investment capital across nine funding rounds.[9] Following an initial round of venture capital of investment in 2014, JUMO staged a private equity round of investment in 2016 led by the aptly named LeapFrog Investments. Moreover, early in 2018, JUMO received US$3 billion of equity investment from Proparco, and represented the very first investment in a FinTech firm by the private sector financing arm of the French state's development agency (Agence Française de Développement, AFD).[10] In September 2018, JUMO raised a further US$52 million in a Series B round of venture capital investment led by the US investment bank, Goldman Sachs.[11] JUMO's press release to accompany this very high-profile round of capitalization quotes Jules Frebault, Executive Director at Goldman Sachs, as stating 'We are excited to partner with this highly capable team as they continue to leverage technology to advance financial inclusion.'[12] London-based Odey Asset Management also invested $12.5 million at the Series B stage. Most recently, in February 2020, JUMO raised a further $55 million of Series C investment, as LeapFrog, Goldman and Odey all decided to double-down on their capitalization of the capacity of the firm to further platformed modernization.

Platformed and racialized expropriation

Historically, the rhetoric of modernity concealed the racialized expropriations of coloniality that contributed to European progress. Colonial power relations made possible expropriations that extracted value from territories and populations in ways in which 'human lives became expendable to the benefit of increasing wealth and such expendability was justified by the naturalization of the racial ranking of human beings' (Mignolo 2007, p. 41). Similar concealments provide the camouflage for the operations of today's FinTech economy in Africa, although articulations of race and the racialized expropriations from black African populations that follow from them are somewhat different. Platforms profess to enable access, empowerment and inclusion within the modern order of rational formal monetary and financial relations. JUMO's website and promotional materials, for example, are replete with representations of users who would appear to be relatively young, tech savvy, upwardly mobile, self-responsible and entrepreneurial. Yet, this obscures how JUMO's modernizing mission in Africa contributes to processes of platformed and racialized expropriation in three main ways. JUMO, in short, contributes to the platformed and racialized expropriation of black African populations as debtor subjects, as data subjects, and as colonized subjects.

First, and most obviously, JUMO facilitates formal credit–debt relations that enable the extraction of direct rents in the form of fees and interest payments. Through short-term loan products – such as 'QwikLoan' in Ghana, offered in partnership with MTN and Letshego Bank, and KasakaLoans in Zambia, offered in partnership with MTN and Barclays Africa – JUMO contributes to the assembly and expropriation of Africans as debtor subjects. As Kish and Le Roy (2015, p. 631) stress more broadly, 'new intrusions of credit and debt into previously unmarketable spheres of life' can entail a 'revaluing of racialized life' that has significant historical affinities with the Atlantic slave trade. The violent relations and expropriations of slavery rested on legal hierarchies of structural racism, and the rendering of slaves as property and equivalent to livestock in ways that, for example, made them insurable by their owners (Baucom 2005). But certain eighteenth-century slave owners, such as Thomas Jefferson, also held that it was possible to improve 'the lives of his human property by giving them the tools and the chance to excel – to invest in themselves, in today's entrepreneurial parlance – even as he profited from his own investment in them' (Kish and Le Roy 2015, p. 632). The developmental imaginary of inclusion and opportunity that makes access to money and finance a marker of what it means to participate in a modern, developed and white economy similarly operates as a justification for the imposition of racialized relations of expropriation. JUMO and its partners configure credit–debt relations and discriminate between previously excluded black populations to differentiate and include those deemed to be investable, creditworthy and capable of bearing debt in both the economic and moral sense of the term.

Telco corporations in Africa typically sell airtime on credit, but JUMO's business model and socio-technical platform expertise makes possible separate and additional unsecured short-term credit products financed through banking partnerships. To say that these loans lead to 'debt enslavement' would perhaps be somewhat misleading, as it would downplay the legally encoded racialized hierarchies and violence of colonial slavery. Nonetheless, the lives of Africa's new formal debtors are reconfigured by the requirement that they meet the obligations that creditors place upon them by investing in themselves. Consider, for example, QwikLoan, the unsecured short-term credit product provided by JUMO and its partners in Ghana. These so-called 'nano-loans' of up to the equivalent of around US$250 can be repaid at any time over a 30 day period, in addition to a 6.9% loan facilitation fee. At the point of sale, the QwikLoan offer that a borrower receives on the USSD interface of their feature phone does not show a calculation of the interest rate that is payable on the loan, just a total amount to be repaid by a specified deadline. If repaid after the 30 days, the APR of QwikLoan amounts to 83.95%, and late fees of 12.5% are chargeable on any remaining balance. QwikLoan is very similar to M-Shwari, a credit product offered in Keyna by Safaricom as part of its move from M-Pesa mobile payments into wider financial services provision (Ndung'u 2018). Research by Donovan and Park (2020) into M-Shwari found that around two-thirds of borrowers use these loans for basic personal consumption rather than emergencies or special occasions. The cost of borrowing is similarly punitive, and the product is explicitly designed for regular use and so-called 'roll-overs', such that it holds out the prospect of what Donovan and Park (2020) term 'perpetual indebtedness'. Indeed, a further feature of JUMO's contribution to QwikLoan also points to how these kinds of products are designed for regular use by retained users. JUMO frequently sends text messages to seven million MTN subscribers in Ghana (roughly 25% of the adult population), offering the kinds of advice that encourages the uptake and upkeep of formal financial relations (Guermond 2019, p. 137). Messages remind users of their responsibilities as debtors, and of the importance of incorporating their debt obligations into money management and the future planning of their economic lives.

Second, JUMO contributes to platformed and racialized expropriation because it makes it possible for telco and mobile money corporations to extract indirect rents from the user-generated data they capture through networked neo-colonial relations. JUMO, then, enables the expropriation of Africans as data subjects. 'Big data' is largely worthless without 'little analytics' (Amoore and Piotukh 2015), and in this instance it is the Unify component of JUMO's stack that is crucial to turning user-generated data into capital for the telco and mobile money corporations (Sadowski 2019). Here racialized expropriation is not an effect of the encoding of race in property law or its articulation in paternalistic discourses of investment. Racialized bodies are not figured as singular, relatively coherent and concrete items of property to be owned and, possibly, to be improved, 'nor as populations stratified according to characteristics that find their genesis in bodily difference' (Than and Wark 2021, p. 2). Instead, race emerges as an epiphenomenon from the analytics of classifying and sorting through proxy data points and abstractions, such that racialized bodies are shifting clusters of data within correlative models. In the terms of Than and Wark (2021), JUMO contributes to the production of 'data formations' based on user-generated data that are also 'racial formations'.

Transactional and geo-spatial data aggregation is crucial to the business model of mobile payments (Maurer 2015, O'Dwyer 2015). The JUMO platform analyses this and other data to assess the creditworthiness of borrowers without financial histories who can be served up to banking partners. Amongst the data points considered material to determining creditworthiness are some seemingly mundane and unconnected behaviours. For the JUMO Drive loan product formerly offered to Uber drivers in Kenya, for instance, driving behaviour data aggregated from the Uber app was also analysed by JUMO. Using proprietary models of machine learning algorithmic and behavioural analysis, JUMO arrives at credit scores by deploying Apache Spark (on AWS) to run algorithms with masses of multiple data types. It typically combines various mobile phone data points (e.g. contract history, airtime purchasing patterns, voice, SMS and geo-locational data) with transactional data points from mobile payments (e.g. rates and quantities of sending and receiving money, cashing-in and -out). JUMO's data analytics, then, contribute to determining which user populations of black Africans will be offered loans, the rates of interest to be payable by differentiated populations on those loans, and the populations of users who will remain excluded from formal credit–debt relations.

In aggregate, moreover, JUMO seeks to minimize cases of fraud and non-performing loans. In 2019, for example, JUMO instigated a new work programme focused on fraud, not least because, 'Even marginal improvements in our ability to predict which applications and accounts represent fraud risk means more loans and savings in the hands of genuine entrepreneurs and business owners' (Watkins-Ball 2019). The firm tested its algorithms on data associated with a pool of lending applicants in Ghana, with the goal of identifying which combinations of data points — from income size to deposit frequency and mobile wallet transaction patterns — could provide for more accurate indicators of likely fraud than existing models. In conjunction with a host of other data, data on mobile phone battery life and the frequency with which users 'let' their phone battery die and how long their phone is off was found to be crucial for calculating fraud risk on loans.

Third, in the countries in which it operates, JUMO contributes to processes of platformed and racialized expropriation that serve to foreclose, more broadly, the economic futures of African populations. Despite its ostensible economic empowerment of modern and entrepreneurial individuals across the African continent, JUMO is fundamentally indifferent to singular individuals. As noted above, JUMO's platforms do not simply enol individual subjects into formal credit–debt relations but, rather, enlist analytically-defined and segmented groups of users. Drawing on sorting and classification techniques developed in credit scoring in the global North over many years for prospective and existing customers with credit histories (Marron 2007), users figured by JUMO through data analytics only become known to the firm and its partners in terms of the behavioural and proxy credit history attributes that they share with others. Users are always already differentiated, that is, grouped, segmented and scored by the platform as a result of its analysis of telecommunication and transaction data points. Put another way, to paraphrase from Bratton (2016, p. 251), users are abstract and data-derived figures produced by JUMO to be profitable, and without which they have no role or essential identity.

Whilst this making of data subjects is a signature practice of the FinTech sector globally and, indeed, of contemporary platform capitalism, it is nonetheless a renewal of much longer-standing tendencies to manufacture 'colonized subjects' primed for dispossession (Couldry and Mejias 2019a). JUMO thus contributes to the platformed and racialized expropriation of African populations as colonized subjects. As Fanon (2008) foregrounds, colonized subjects in Africa and beyond were denied the modern liberal rights and freedoms of the individual, and thereby degraded and relegated to an inferior subhuman status and reduced to objects. Today, this effacing of personhood is less a matter of legal and representational categories of race and racialized differences between colonizers and the colonized, and more a matter of manufacturing new racialized differentiations and discriminations through data analytics. Much like the category of 'subprime' in US mortgage markets at the turn of the millennium, 'unbanked' is a racial signifier for colonized populations of would-be FinTech users that become known through data analytics and thereby 'rendered expropriatable anew' (Chakravartty and Ferreira da Silva 2013, p. 6; see Aitken 2017). Africans are presented with little choice – they can apparently only achieve development and modernization as enlightened and free individuals modelled and differentiated in terms of European whiteness, and they continue to be deprived and shorn of the sovereignty necessary for emancipation.

Conclusions

Developing a case study of JUMO, this paper has made a three-fold contribution to social science research into the expansion of FinTech in Africa. First, contrary to the positive claims made for FinTech in global development agendas, we have built on critical social science research into mobile payments that highlights how FinTech economies serve to open new frontiers for the appropriation of rents from African populations. JUMO forges partnerships with banks and the telecommunications corporations that pioneered mobile payments precisely to extend opportunities for the extraction of direct and indirect rents through high-cost and short-term credit products made available to users via mobile wallets. Second, rather than connect the growth FinTech in Africa with the marketization, financialization and datafication processes of present-day capitalism, we have stressed how Africa's FinTech economy is constituted through distinctive processes of platformization and platform capitalism. We would contend that this is starkly revealed by the role of JUMO as an aggregator platform or PaaS, around and through which 'at-a-distance' and 'at scale' formal credit-relations are assembled with differentiated user populations. Third, while the expansion of FinTech in Africa certainly rests on exclusions rooted in colonial histories, we have argued FinTech is renewing and recasting colonial relations in the present. Enrolling user populations who were unconnected and excluded under colonial regimes, FinTech platforms such as those featuring JUMO are assembled through neo-colonial corporate telecommunication, digital and data infrastructures. Moreover, as JUMO also illustrates, FinTech platforms, in effect, extol a modernizing and civilizing mission of enlightened development and individual empowerment whilst simultaneously extracting rents through racialized expropriations that are a marker of coloniality.

By way of closing remarks, we want to respond pre-emptively to the kinds of criticisms that our three-fold contribution is likely to garner from social scientists with allied research interests. To be clear, we do not want to retreat from the claims made throughout the paper, but proactively defend our arguments against some of the main objections we have already encountered when presenting previous versions of the paper at conferences and workshops.[13] One set of such objections centre on the centrality of JUMO to our wider claims. Interrogating a relatively small, early-career FinTech firm specializing in market-making through data aggregation and analysis – rather than a major corporate telco or bank with a significant line of FinTech lending business – could be interpreted as an analytical difficulty and limitation. Given how JUMO works to build platforms that connect with differentiated user populations via telecommunications infrastructures and the interfaces of 'retro' feature phones, moreover, this exploratory case might also be held to be less insightful for understanding the full range of processes through which FinTech platforms configure monetary and financial relations. User populations that access the FinTech sector via smartphone applications linked to cloud computing are also platformed, so to speak, through the practices of user experience (UX) and user interface (UI) design (Ash, Anderson, Gordon and Langley 2018). Nonetheless, we would hold that concentrating on the B2B workings of the JUMO business model as an exploratory case study has assisted in opening-up the socio-technical practices core to FinTech platform reintermediation in Africa. Such practices are proprietary and 'black boxed' by telcos and lenders (Pasquale 2015), but are, to some degree at least, explicitly put on display by JUMO to attract would-be business partners, JUMOnauts and investors. Focusing on JUMO has also attuned analysis to the distinctive features of FinTech platform reintermediation in Africa. JUMO's business model explicitly enables the combination of neo-colonial architectures of digital and data colonialism with corporate mobile telecommunication infrastructures, and reveals how telcos engage in partnership building to blur the boundaries between telecommunications, money and finance.

We are also aware that our analysis and argument is open to the charge that its overstates the neo-colonial power of platforms and offers a disempowering account of FinTech in Africa. We acknowledge how the ostensibly inclusionary expansion of FinTech in Africa continues to feature exclusionary practices (Natile 2020), remains 'truncated and uneven' (Bernards 2019b, p. 815), and can produce 'reluctance', 'dissent' and 'denial' amongst users (Guermond 2020b). We also recognize that our contribution to social science research into FinTech in Africa risks overshadowing alternative monetary and financial practices by giving undue analytical weight to the force of formal, capitalist arrangements (Musaraj and Small 2018). However, our intention here has not been to deny the contingency, contestation and limits of the expansion of FinTech platforms that social science research may serve to emphasize, nor to refute the importance of ethnographic studies that can reveal the ways in which new monetary and financial technologies can become embedded within existing social interactions and cultural practices. Nonetheless, confronted by the prevailing mobilization of FinTech in global development agendas and the opportunities this creates for value extraction from African populations via poverty payment and now poverty credit, we find it necessary to foreground how the expansion of the sector is a deeply colonizing process. The growth of FinTech in Africa is a process of platform political economy that builds from colonial legacies of exclusion and contributes to neo-colonial relations in the present. In particular, we have shown how the business models of FinTech platforms seek to recruit differentiated user populations who were previously unconnected and excluded from formal financial relations, and how platforms are socio-technically assembled through neo-colonial corporate telecommunication, digital and data infrastructures. We have also shown how what we have termed platformed modernization and platformed and racialized expropriation are the two inherently interconnected faces of the neo-colonial relations now being produced by the FinTech sector in Africa.

Notes

1. https://jumo.world (accessed November 1st 2021) and https://digitaltimesng.com/jumo-breaks-2-5-billion-disbursement-mark-in-africa-and-asia/
2. https://www.jumo.world/company and https://www.jumo.world/community-article-18092018 Accessed 12th December 2020
3. Uber partners with JUMO to provide driver-partners with vehicle finance - JUMO
4. https://jumo.world (accessed November 1st 2021)
5. USSD are also sometimes referred to as "Quick Codes" or "Feature codes". They are a communications protocol that can connect second generation mobile phones with the mobile network operator's computers. USSD can be used for basic internet browsing, prepaid callback services, mobile-money services, location-based content services, and menu-based information services.
6. https://www.youtube.com/watch?v=taDnewu2rbs
7. https://www.jumo.world/ Accessed 25th November 2020.
8. Blog post available at https://www.centerforfinancialinclusion.org/getting-credit-right
9. Crunchbase is the leading global database on private companies. For information on JUMO, see https://www.crunchbase.com/organization/jumo-2
10. https://www.proparco.fr/en/innovation-proparco-announces-its-first-investment-fintech-develop-mobile-loans-africa
11. https://www.iol.co.za/business-report/technology/sa-fintech-jumo-to-expand-in-asia-with-goldman-sachs-backing-17126439
12. https://www.jumo.world/community-article-18092018
13. Previous versions of the paper were presented at: Emerging Global Networks of FinTech, National University of Singapore, 2018; StadsSalonsUrbains Public Lecture series, VBU, Brussels, 2019; Zurich Human Geography Colloquium, University of Zurich, 2021; Centre for International History and Political Studies of Globalization (CRHIM) Lecture Series, University of Lausanne, 2021; and, FinTech in the Global South, Durham University, 2021. We thank all organizers and participants for their engagements with our work.

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No potential conflict of interest was reported by the author(s).

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